HANDBOOK OF PHONOLOGICAL DATA
FROM A SAMPLE OF THE WORLD'S LANGUAGES

A Report of the Stanford Phonology Archive

Compiled and edited by

John H. Crothers
James P. Lorentz
Donald A. Sherman
Marilyn M. Vihman

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	115 Swahili	115 Swahili	115 Swahili
115	01 p	14 v[08]	28 m-syllabic[04] [m-labiodental-syllabic][62] (free)
115	02 p-aspirated[01]	15 theta[03] (loan)	29 n-syllabic[04] [eng-syllabic][62]
115	03 b-implosive [b][60]	16 eth[03 07] (loan)	
115	04 t[07]	17 s[07 08]	
115	05 t-aspirated[01]	18 z[08]	
115	06 d-implosive [d][60]	19 s-hacek[08]	51 i [iota][65]
115	07 j-implosive [d/z-hacek][60 61] (allo,free) [z-hacek][61] (free)	20 gamma[03] (loan) 21 m 22 n	52 e [e-mid][65] (allo,free) 53 a [alpha][66] [a-front][66] [schwa][66]
115	08 k[02 07]	23 n-palatal	
115	09 k-aspirated[01 02]	24 eng[05]	54 u [upsilon][65]
115	10 g-implosive[02] [g][02 60] (allo,free)	25 l[06 07] 26 r-trill[06 07] [r-flap][63] (free)	55 o [o-mid][65] (allo,free)
115	11 t/s-hacek		
115	12 t/s-hacek-aspirated[01]	27 h [x][64] (loan,free)	56 yod[67]
115	13 f[08]		57 w[67]

115 $a Swahili $b Standard $d Bantu $e E Africa $f 15 million $g Merritt Ruhlen $g Jim Lorentz (review) $g John Crothers (editor)

115 $a Polome, Edgar C. $b 1967 $c Swahili Language Handbook $g Washington, D.C.: Center for Applied Linguistics

115 $a **INTONATION** $A "There are three terminals in Swahili...: (a) high/low...with a high or high-falling pitch on the penultimate stressed syllable and low pitch on the final non-stressed syllable. (b) mid/high-falling...with a mid or mid-rising pitch on the penultimate stressed syllable and a high falling or low pitch on the final syllable, which is somewhat longer in the case of a high-falling pitch. (c) high sustained...with a high pitch on the penultimate stressed syllable, the final syllable being on the same level or on a somewhat higher pitch. The high/low terminal occurs: (1) in plain statements and orders... (2) in direct answers to questions without an interrogative particle and in the second part of contrastive sentence patterns... (3) in questions with an interrogative particle where it appears as a contrast of pitch level between the particle itself and the preceding word.... The mid/high-falling terminal occurs in questions without interrogative particle.... The high sustained terminal...occurs only at major pauses in long utterances, especially sentences consisting of more than one clause, and marks the continuity of speech after the relevant syntactic boundary. It is always characterized by an ascending pitch-contour starting at mid level and rising progressively to final high pitch." (p.51-57)

115 $a **LONG CONSONANTS** $A "Consonant length has...been assumed to be phonemic on the basis of a few minimal pairs..., but the contrasts are restricted to the cases where Arabic loans with original double consonant occur alongside Bantu words consisting of the same segmental phonemes. Since the original Arabic double consonant is usually ignored in Swahili, the long consonant in these loans may be nothing but a sophisticated Arabized pronunciation, comparable to the lengthening which occurs sporadically with the emphatic stress." (p.58)

115 $a **STRESS** $A "Stress occurs as a rule on the penultimate vowel phoneme or syllabic allophone of a nasal phoneme. However, in some loanwords, mostly of Arabic origin, it is liable to occur on the antepenultimate...; the Arabic stress pattern might be considered a stylistic feature.... Though, in most cases, /stress/ occurs automatically on the penultimate syllabic...contrastive

pairs [exist]...confirming the phonemic status of stress in Swahili." (p.50-51) Stress is manifested at least in part by "marked lengthening" (p.47) of the stressed syllabic and "a slightly higher pitch." (p.52)

115 $a **SYLLABLE** $A (C)(C)(C)V $A Closed syllables occur only in non-Bantu loans. Syllabic nasals are another syllable type. Falling diphthongs occur in some Arabic loans. (p.50) $A initial CC: nasal + C; C + glide (Others occur in loans.)

115 01 $A "The problem of the voiceless aspirates is one of the most complex of Swahili phonemics. Whereas their phonemic status seemed fairly well established a few generations ago, there is considerable inconsistency as regards aspiration in the idiolects nowadays in Zanzibar and the neighboring coastal area [while there are minimal pairs of unaspirated and aspirated segments, the number of such contrastive pairs seems to be on the decrease. MR].... There appears to be a general tendency to connect aspiration with stress and with initial position.... The blurring of the contrast between aspirate and non-aspirate is...probably ascribable to the following causes: (a) its low functional yield... (b) the tendency to aspirate initial voiceless stops and affricates... (c) the absence of notation of the aspiration...in...the writing system of Swahili... (d) the growing influence of the numerous non-native speakers...." (p.39-41)

115 02 $A "The point of articulation of the allophones of /g-implosive/ and /k/, as well as of /k-aspirated/, is situated further back before velar vowels." (p.41) "Some speakers...do not pronounce the velar voiced stop implosively in any position." (p.42)

115 03 $A "The fricatives /theta/, /eth/ and /gamma/ appear exclusively in Arabic loanwords, their occurrence being restricted to two environments: (1) prevocalic initial position... (2) intervocalic position.... However, in verbal forms they may also occur after the syllabic allophone of /m/ in the morpheme functioning as object pronoun of the third person singular.... [These] fricatives...are part of the phonemic system of all educated Swahilis on the islands and in the coastal areas. Further inland, speakers who are less influenced by Arabic pronunciation tend to substitute [s] or [t] for [theta], [z] for [eth] and [g] for [gamma]. Consequently, these fricatives...are to be excluded from the minimal phonemic system of Swahili in areas where such pronunciations...prevail." (p.42)

115 04 $A Syllabic nasals occur as the realization of certain prefixes in certain environments. Stressed /m-syllabic/ occurs before all consonants except /yod, w/. Stressed /n-syllabic/ occurs before dentals and palatals, and [eng-syllabic], which can be considered its allophone, occurs before velars. /m-syllabic/ occurs also unstressed, while unstressed /n-syllabic/ varies freely with non-syllabic /n/. Before certain stems beginning with labials /n-syllabic/ becomes [m-syllabic]. (p.43, p.67-9) "Numerous speakers" freely replace the syllabic nasals with syllables with an epenthetic vowel, [upsilon] after [m], [iota] before [n] (also sometimes before [m] in disyllabic words). (p.44)

115 05 $A "The phonemic status of [eng] might be questioned on account of its rather low functional yield outside clusters with a velar obstruent, where it could be interpreted as a velar allophone of /n/. However, the occurrence of...minimal pairs [contrasting]...[eng]...[eng.g]...[n]...[n-palatal]...evidently implies positing /eng/ as a consonant phoneme of Swahili." (p.43)

115 06 $A "The phonemic status of /r-trill/ versus /l/ is clearly evidenced by...minimal pairs.... It should, however, be pointed out that (a) most of the lexical evidence for /r-trill/ consists of loanwords mainly from Arabic... (b) in Bantu words, /l/ occurs more frequently before the high and mid front vowels, and [r-trill] appears mostly in free alternation with [l].... It seems probable that [r-trill] was originally merely a free variant of [l].... Whereas the alternation [l]-[r-trill] was originally dialectal in Bantu, the impact of Arabic influence made the distinction between /l/ and /r-trill/ phonemic and led to a rather arbitrary redistribution of /l/ and /r-trill/ in words of Bantu stock." (p.44-45)

115 07 $A "The special social situation resulting from the prestige of Arabic culture among the Swahili Muslims of the islands and coastal areas...has led to important stylistic differentiation in Swahili pronunciation. In the solemn style of recitation and public address in the mosque, and in other types of formal speech, a typically Arabized pronunciation of Arabic loans can be heard. Its characteristic features are: (1) a distinction between an 'emphatic' and a 'non-emphatic' articulation of the allophones of /t/, /s/ and /eth/: this distinction is especially marked in the case of /t/, whose 'emphatic' allophone is characterized by a dental pronunciation...with a simultaneous raising of the back of the tongue, producing a mid-high velar glide...; the same velarization appears in the 'emphatic' allophones of /s/ and /eth/... (2) a velarized allophone...of /l/... (3) a postvelar articulation [q] of /k/... (4) a dental articulation...of /t/ (5) the occurrence of the pharyngeal fricatives [pharyngeal-voiceless] and [pharyngeal-voice] and of the [glottal stop]...[pharyngeal-voice] and [glottal stop] alternate with zero in ordinary speech...[pharyngeal-voiceless] appears as an allophone of /h/... (6) a uvular articulation...of /r-trill/.... Whereas the characteristic velarization of the 'emphatic' obstruents does not usually occur in colloquial speech, other features of the Arabized pronunciation may occasionally be heard in current conversation with more sophisticated speakers." (p.45-46)

115 08 $A "Unpredictable alternations occur in certain morphemes." (p.46) Examples show /f/ alternating with /v/; /s/ alternating with /s-hacek/; /v/ alternating with /z/. (p.46)

115 60 $A Implosive stops are realized as plain stops: (1) after (homorganic) tauto-syllabic nasals. Note that: "In words of Bantu stock, consonant sequences are always tauto-syllabic." (p.50) Thus in native words, rule (1) can be generalized to apply after any non-syllabic nasal. (2) after syllabic nasals which derive from basic /n-syllabic/. Note: /j-implosive/ is realized as [d/z-hacek] (rather than simply [j]) in environments (1) and (2). Some speakers use only the plain voiced [g] for /g-implosive/. (p.42)

115 61 $A "In certian areas, there is...a widespread tendency to [the] affrication of /j-implosive/ in all environments; between syllabics, a postalveolar voiced fricative [z-hacek] may then occur in free variation with [d/z-hacek]." (p.42)

115 62 $A /m-syllabic/ may be realized as [m-labiodental-syllabic] before labiodentals. /n-syllabic/ becomes [eng-syllabic] before velars. Before labials basic /n-syllabic/ either is lost or merges with /m-syllabic/. (p.43, 67-9)

115 63 $A "In colloquial speech, Swahili /r-trill/ is commonly reflected by a short apico-alveolar trill, which can be reduced to a single tap. It accordingly appears regularly as an apico-alveolar flap [r-flap] in the pronunciation of many speakers." (p.44)

115 64 $A "The velar allophone [x] of /h/ occurs only in loanwords with Arabic /x/, but is always in free variation with [h], except in a few lexical items.... Elsewhere, the glottal allophone [h] is preferred by speakers who are less influenced by Arabic pronunciation." (p.43)

115 65 $A The higher variants of the non-low vowels occur in stressed syllables with "marked lengthening" (regarded here as a stress feature.) Before nasal plus obstruent stressed vowels have the lower quality and are "half-long," but the higher and lower variants of the mid vowels are in free variation in this environment. The lower allophones occur unstressed. (p.47)

115 66 $A "The allophones of /a/ are spread over an apparently continuous stretch from back to front, depending on the preceding non-syllabic: after [w], [alpha] is pronounced quite far back...in the neighborhood of Arabic 'emphatics' it is pronounced farther back and even combines with their velarization into a diphthong in pronunciations with a deliberate Arabic bias.... [The diphthong is not coded here, since its use is restricted to the Arabicized speech style.] Its pronunciation is more central after velar and labial or labiodental consonants, and slightly fronted after dental or alveolar consonants; it is very fronted after [yod] .... As a rule, in final position [/a/is]...pronounced further back than elsewhere and may be 'weakened' to a mid low [sic] central vowel [schwa]. This [schwa] allophone also occurs sometimes in other unstressed positions." (p.47-48) Long and half-long variants of [alpha] and [a-front] apparently occur under stress and under stress before nasal plus obstruent respectively.

115 67 $A Transitional [yod] and [w] "occasionally occur in intervocalic environments." (p.48) In the examples given, [yod] occurs in the environment of /i/, [w] occurs between a back rounded vowel and a following unrounded vowel.